Disaster Medical Care

The Program of the U. S. Public Health Service

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WITH THE DETONATION of the first thermonuclear weapon, the need for a whole new structure of defense activities was imposed; the entire existing defense posture became obsolete in a matter of seconds. The country was forced to prepare to face a situation where it was possible for one weapon to wipe out an entire city. Later it was shown that the accompanying effects of such a weapon could extend the target devastation to surrounding areas far removed from the primary target.

On the heels of this questionable advancement in the field of physics and electronics, came additional danger potentials to threaten our defenses and necessitate counter action: New or more efficient kinds of chemical and biological weapons and vastly more expeditious means of delivering them.

As long as there exists in this world a political, economic and social system dedicated to destroying our way of life, we must accept the possibility of the use of these weapons as a part of the world in which we live, and the framework around which we must build both military and civilian defenses.

Responsibility for defense of the nation's civilian population is quite properly placed in the executive office of the President, where lies the authority for direction of the government and command of its military and civilian forces.

Civil Defense operations are conducted under the National Plan for Civil Defense and Defense Mobilization promulgated by the President of the United States in 1958. Under the authority granted the Office of Civil and Defense Mobilization (OCDM) certain preparedness activities are delegated by that organization to other federal agencies, and money to support these delegated activities may be transferred to the respective agencies.

To the Department of Health, Education, and Welfare (HEW), the director of OCDM has delegated responsibility for the preparation of national plans and the development of preparedness programs covering health services, civilian health manpower, and other health resources. The delegation also charges the secretary of the Department of Health, Education, and Welfare with responsibility for coordinating the civilian health emergency programs of other federal departments and agencies. It is on the Public Health Service, and specifically, the Division of Health Mobilization, that the secretary relies for the implementation of these activities.

The Division of Health Mobilization was created May 1, 1959, for the express purpose of determining the medical and health needs of the nation in time of emergency and developing operational programs to assure that these needs will be met. Originally, the division was placed under the administrative structure of the Bureau of State Services of the Public Health Service. On July 1, 1960, it was transferred to the Office of the Surgeon General.

The division is organized as follows: *Office of the Chief*: Here program plans and policy guidance are developed for the conduct of operational programs under the division's direction, and control is maintained for the provision of a balanced program activity, coordinating the operational programs of the branches and field offices into a concerted effort to attain the long range objectives as well as immediate goals of the entire program effort. Under this office, four branches have been established:

1. *Program Services Branch*, which directs and supervises field activities of the division, including personnel assigned to Public Health Service regional offices, to states, to other agencies or organizations, or to special field studies.

2. *Health Resources Branch* evaluates the requirements for health supplies and equipment, including drugs, medical equipment, supplies, and chemicals used for sanitation, by inventorying existing supplies and assessing the ability to utilize such resources. By evaluating the requirements and the available supplies in accordance with expected damages, calculated loss of mobility, and capabilities of utilizing health supplies, the Health Resources Branch estimates the post-attack discrepancy of supplies and requirements, and recommends procedures, such as stockpiling and inventory control, to overcome such disparities.

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3. *Stockpile Management Branch*—On November 1, 1960, responsibility for planning and operating the Nation's emergency medical stockpile program was transferred to the Division of Health Mobilization from the Office of Civil and Defense Mobilization. Currently on hand is about $200 million worth of medical supplies and equipment located in 33 warehouses throughout the country. The largest single item included in the stockpile is 1,931 "packaged" 200-bed hospitals for civil defense emergency use, valued at an average of $20,000 each. About 1,500 of these are now stored at strategic locations, or prepositioned, across the country and others are in use for demonstration purposes and for training personnel. Stockpile responsibilities include procurement, maintenance, storage, inspection, quality control, distribution, utilization, and property accountability of essential survival supplies and equipment.

4. *Training Branch*—One of the major activities of the division is the training of medical and health-related professions in the area of health aspects of Civil Defense. With the recognition that in the event of a major attack, there would be an unprecedented number of casualties, far more than the professional personnel available can possibly treat, it is considered imperative that preparation be made to assure that in an emergency effective use can be made of the skills and resources of the medical and allied professions. Through regularly scheduled training courses, physicians and others can receive information and training in disaster activities. Specialized courses also are given in emergency hospital management and in areas of particular concern for nurses and environmental health specialists. In addition, several courses have already been conducted on the state level, and many more are planned. This is consistent with one of the goals of the training program—to assist states in providing training for personnel on a state or community basis.

Also being developed by the Training Branch is a Medical Self-Help Training Program whereby individuals will be helped to develop a capability to meet their own health needs in the event of a national disaster, either through self-help or neighbor-help principles. This program is being tested, and reaction is most favorable. A medical self-help training kit based on the Air Force Buddy Care Kit, which has proven most successful, has been produced. This civilian training kit contains complete teaching and lesson material, including visual aids, with which laymen can teach classes of laymen lifesaving skills and techniques which will assist them to save or maintain life in the absence of a physician or until medical help can be obtained.

In conjunction with this program, a research program was instituted with OCDM funds in 1959 to explore various areas of basic survival from the standpoint of an average American family and to detail measures of accomplishment under austere conditions. From these studies, which were conducted with the endorsement and continuous review of the Council on National Security and its Committee on Disaster Medical Care of the American Medical Association, a manual has been developed which is now in final production stages. Initial distribution will be made to physicians, both private and governmental, and then it will be made available to the public.

Included in the operational format of the Division of Health Mobilization is a section devoted to preparing plans for a Federal Emergency Health Service organization which will, in an emergency, result from consolidation of the existing federal health services organization such as the Public Health Service, Veterans Administration, Food and Drug Administration, and Office of Vocational Rehabilitation. This plan will allow agencies with related functions to plan to work together in an emergency without concern for normal lines between the respective peacetime activities. We hope this national cooperative planning will set a pattern for cooperative planning at the state and local level. Such an approach, providing a basis for emergency work by existing agencies, can result in rapid and coordinated post-attack action by government employees who are now on the job. This is "built-in" civil defense in its truest form.

Physicians who are "research minded" doubtless will wonder at the seeming omission of a Research Branch under the division's aegis. An explanation of the financial structure under which the division operates may help to explain: Each year, the Public Health Service develops a proposal for an emergency program for the following budget year and submits this proposal through the Department of Health, Education, and Welfare to the Director of OCDM. Our proposed program, along with proposed programs of other delegate agencies is then submitted to Congress by the Director of OCDM. When the money is appropriated, the health share is then transferred to the Public Health Service under the terms of a contract with OCDM. In this contract, OCDM specifies what it expects to accomplish with the money. The Public Health Services current appropriation is not commensurate with the Civil Defense health services needs. Several research projects have been initiated for study of such pertinent questions as standardized treatment procedures for austere medical care and utilization of health manpower, and it is hoped that in the future we will be

able to conduct a research program of a scope much closer to what we consider definitely necessary.

This is a brief description of our Civil Defense health services organizational structure at the federal level. Having federal organization does not necessarily assure that the job will be done, however.

Following are some of the things that we, as individuals and as community representatives, must consider if we are to "get something done" in health mobilization.

The National Plan for Civil Defense and Defense Mobilization, promulgated by the President in October, 1958, defines the mission of nonmilitary (or civilian) defense as an integral part of the total defense of the nation. This mission includes:

1. Protection of life and property by preparing for and by carrying out nonmilitary functions to prevent, minimize, repair, and recover from injury and damages; and

2. Mobilization and management of resources and production.

Much has been done by states and their local jurisdictions toward preparing for the protection of life and property, the first part of this two-fold nonmilitary defense mission. The states, with encouragement, guidance and assistance from the Office of Civil and Defense Mobilization, have prepared and published comprehensive operational survival plans.

These operational plans specify the actions required by governments and the people under emergency circumstances in the provision of essential community services and disaster relief to the population. Included are measures for providing emergency health services, including medical care, welfare services, fire and rescue services, law enforcement, traffic control, radiological defense, public information, emergency communications, transportation and other vital services required to protect life and property in a disaster.

State and local plans are less complete in the second part of the two-fold nonmilitary mission, although consideration in some states is being given to specifying control of goods and services and effectively directing their distribution and use during an emergency. Also being developed are rationing systems for food, fuel and clothing and other necessities for continued operation of essential industry and business, use of money and credit, and restoration of essential services.

All Civil Defense plans and activities bear directly upon our health program. The plans should group these activities in such a way that they will function in unison, under control, to produce a desired result —survival of the community. It has been proved under all conditions of war and peace that people succeed best who form definite ideas of what they are going to do before they start to do it. Without a plan, we drift into situations and find ourselves at the mercy of circumstances. To "get something done" in Civil Defense we must have an emergency operations survival plan which provides for an organization and the functions this organization is expected to perform.

It is basic to sound planning that we be guided by the principles of:

Simplicity
Flexibility
Utilization of units in-being
Practice.

The problems of getting widespread participation and sustained enthusiasm in Civil Defense are difficult. However, if we have clear-cut plans that can be readily modified to meet the situation; if we plan to utilize units in-being, prescribe procedures which are in themselves simple, flexible and widely known, all we need is practice and rehearsal to make the transition from a paper plan to operational capability.

Let us now consider the planning that is necessary to provide community health services in an emergency.

First, the primary mission of emergency health services is to:

- Minimize the effects of natural or man-made disaster, through such measures as mass casualty care, emergency preventive health services, and rehabilitation;
- Maintain good health of noncasualty population; and
- Restore essential community health services in order that the country can recover as quickly and effectively as possible.

Post-attack health problems that complicate the successful completion of the civil defense mission are increases in morbidity and mortality resulting from:

Destruction of water systems
Destruction of sewerage systems
Loss of essential health services
Lack of shelter, clothing, fuel
Increased insects and rodents
Overcrowding and inadequate food and
Emotional and psychological strains.

Overriding these secondary problems are the two major problems that will make the provision of health services extremely difficult in case of enemy attack:

The wide *disparity* that will exist between the resources that remain after attack and the require-

ments for these resources for casualty and non-casualty care; and

The *radiation fallout* that may interdict prompt response and rescue as well as create additional casualties. Food and water may be contaminated and essential services such as heat, water, food, and medical care that were not destroyed by the initial detonation may be denied for extended periods.

The use of biological and chemical warfare agents will pose additional problems. Both may be used before and after attack or concomitant with the use of thermonuclear weapons, both can be used in either a covert or an overt manner, and both are effective and are difficult to recognize and counteract. The most significant similarity between chemical and biological warfare is in the method of disseminating the morbid agents. The most likely use of either would be with various devices capable of producing large numbers of very small airborne particles or aerosols.

These are versatile weapons that pose significant problems in health mobilization planning.

With this brief look at the mission of emergency health services and some of the major problems we will face in an all-out attack upon this country, let us review some of the elements of emergency health service planning.

In carrying out the mission of the emergency health service, the Health Plan must include measures to:

1. Minimize the number of casualties that will result from the attack, including shelter and evacuation, education and training in survival techniques, and health preparedness measures.

2. Develop capability to provide mass casualty care, including education of the populace in first-aid and self-care, stockpiling of resources, and expanded function training.

3. Develop capability of the community to organize and institute efficient emergency health services including reestablishment of preventive health controls, community health services.

4. Develop mutual assistance plans with adjacent areas despite local or state boundaries in order that the most efficient management of available health resources can be realized.

In development of the community Health Plan, the following rules are important: Fix responsibilities for specific actions on specified individuals; always consider possible alternative courses of action and designate alternates to key positions; and, most important, be guided by basic assumptions and estimates so that your plan will be responsive to the situation.

Certain assumptions are basic and are already contained in the National Plan, the State Plan, and all ancillary plans. From time to time, new assumptions are necessary, which requires periodic revision and updating of plans. Here are the assumptions that are believed to be fundamental:

- There will be *disparity* between available resources and the requirements for those resources. This is the most controlling assumption with which we must deal. This deficiency of resources requires such measures as self-help and expanded responsibilities for health personnel, both of which necessitate previous training; improvisation of facilities, supplies and equipment; stockpiling; triage; and standardized treatment procedures.
- *Communication will be limited* or not available. The loss of this essential service requires that all personnel have a thorough knowledge of the total plan and their specific job in order that operations will remain coordinated.
- There will be widespread destruction or *denial of hospital and medical facilities.* Emergency hospital units must be stockpiled in nontarget areas; treatment facilities must be improvised; and, reliance must be placed on self-care or neighbor-care.
- It must be assumed that due to fallout most communities will experience *a delay of days or more before organized medical care can be reinstituted.* This, again, emphasizes the importance of self-care and neighbor-care; personal stockpiles of food, water, and medical survival items; and training of the general population in personal survival.
- It must be assumed that *biological and chemical warfare* agents will be used. Every effort must be made to supply protective measures against these agents as they become available. Training in self-protection, decontamination, and treatment is essential.

Within the frame of reference of these assumptions, the Health Operations Plan must provide for and describe in some detail the situation for which it is developed and the support and resources that are available to implement the plan.

It should not only designate who is responsible for activating the plan, but how key personnel are to be notified, where control points are located, and the specific actions that are to be taken initially, automatically.

Special professional instructions covering organization of sub-units, treatment procedures, use of medical and health supplies and equipment, and actions to be taken (when and where) should be included in these instructions.

The community's health plan must provide guidelines for rescue and evacuation of injured, radiation monitoring, special measures for chemical warfare and biological warfare defense, preventive medicine, emergency sanitation, mortuary services, registration and the ways and means to be used to test the feasibility of these measures.

Finally, the methods to be used in providing the essential training to all personnel necessary to ensure successful operations in the event of disaster should be included in the plan.

In the actual situation, we must be prepared to make changes if we find that the "ideal" operation we have planned, rehearsed and practiced is impossible, either in part or as a whole. Multiple attacks upon the country may necessitate revision to a primitive situation after we have reestablished organized health services. Radiation fallout may not follow our assumptions either in direction or extent. In spite of the best planning and training, malfunctioning of key personnel may require extensive changes in our plan of operation.

In spite of all these unplanned-for possibilities, the community that has a plan, and has taken necessary steps to develop a capability of implementing the plan will find itself well prepared to adjust to varying conditions. Planning prepares us to make a wise alliance with circumstances.

The successful operation of an emergency health service program of "getting something done" in health mobilization depends upon:

A sound plan of operation
Aggressive leadership
Efficient use of available supplies, equipment, and facilities
Intensive operational training, practice and rehearsal
A force-in-being, mission-oriented
A response to certain basic requirements such as provision of shelter, stockpiling essential supplies and knowledge of survival principles.

The road to operational capability and "getting something done" is long, rough and fraught with many discouraging setbacks. We need constant assurance, motivation and stimulation. The newcomer to the field usually starts out with enthusiasm, only to become discouraged at how difficult it is to get support, to demonstrate measurable progress and to find something tangible enough "to get his hands on."

In Civil Defense, we must do more than bring forth ideas. We must plan how to make the ideas effective and, more importantly, how to push the plans through to successful completion. This requires steady sustained effort on the part of the entire community. There is a tendency to look for an easy way to by-pass all the difficult, detailed work that is necessary to develop a real Civil Defense capability.

In health mobilization we must base our operational plans upon the resources that are actually available rather than wistfully planning what we would like to have to do the job in an ideal manner. The greatest existing asset of the medical profession is its perfected ability to function in an emergency. By basing emergency plans upon what is actually on hand, we have the capability to go into operation immediately, if necessary. In the meantime, we can persist in our efforts to increase our capability by adding to our resources.

Let us continue to devote our best efforts to planning the wisest attack on the problems of Civil Defense health services. But, when the chips are down as an old maxim instructs, "do the wisest thing, if you know what it is, but anyway do something—the wisest thing you know."

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